

Extended Abstract

Concordance in Spousal Reports of Current Contraceptive Use in India

Background:

Use of contraceptive method enables women and couples to have the number of children they desire and when they desire them (birth spacing). Increased use of modern/traditional methods is often recognized as one of the major reason for fertility decline [1]. This makes the contraceptive prevalence rate an essential indicator of a family planning program's performance. At present, the prevalence of contraceptive is 63% among women globally, approximately 70% in the western world and 61% in Asian countries. Generally, contraceptive prevalence rate is based on women's self-reports of contraceptive use. However, the validity of such self-reported prevalence becomes questionable, when women's answers do not match with the reports given by their husbands.

Studies conducted in African countries have pointed out that men are generally more likely to over report the use of (particular) contraception as compared to their wives. Several reasons such as social acceptability of the contraception, non-reporting of private matters to an outsider, husband-wife disagreement on use and lack of communication among couples may lead to such differences in reports. Therefore, considering only one partner's response may lead to over reporting or underreporting of contraception prevalence. Moreover, the extent to which individuals' responses to reporting and non-reporting of contraceptive method are consistent with the responses of spouses is also important to know.

Objectives:

With this backdrop, we aimed to investigate the concordance in responses on contraceptive use among Indian couples. Specifically, the objectives of this paper are:

- 1) To assess the extent of consistency in spousal reports of current contraceptive use with method specific consistencies.
- 2) To map the differentials of agreement on contraceptive use among couples.

Methodology:

The paper utilizes nationally representative unit level data for matched Indian couples from the latest National Family Health Survey 2015-16 (NFHS-IV). There were a total 63,696 couple records. Both (husband and wife) were interviewed separately by same-sex investigators in local languages to avoid contamination of information. Variables on current contraceptive use by husband and wife were included in the analysis. Since the couples' reports of current contraceptive use can be affected by the use of contraception with other sexual partners besides spouses, couples who had only their spouse as a sexual partner in the last 12 months were included. After excluding couples, in which the respondent had a sexual partner other than their spouse, the analytical sample was reduced to 62,910 couples.

The outcome variables were agreement among spouses about use of contraceptives and specific method. All modern (limiting and spacing) and traditional methods were considered. Responses of husbands and wives on different methods of contraception were categorized into the following five groups: husband and wife reported the same method; husband and wife reported contraceptive use but for different methods; husband said no and wife said yes to contraceptive use; husband said yes and wife said no to contraceptive use and both reported no contraceptive use. The following classifications to assess agreement about contraceptive use were used:

- Agreement on contraceptive use without focusing on any specific method i.e. use of any method reported by both husband and wife [2]
- Agreement on specific method use [2]
- Agreement on the use of limiting method.

Three method specific indices of agreement [2] were also calculated:

- The ratio of the couples where both partners reported use of same method to either reporting any method (Total Exact Method Consistency);
- The proportion of husbands reporting a given method whose wives reported use of the same method (Marginal Distribution) and;
- The proportion of husbands (wives), reporting a specific method, whose spouse did not report the method use (Denial).

To analyze the determinants of agreement/consistency among contraceptive users, selected covariates (Table 2) were considered. Except duration of marriage, the covariates were categorical in nature. Bivariate analysis, test of significance (chi-square) and agreement (Kappa-using weighted cases), and multivariate analysis (logistic regression) was performed. For logistic regression analysis, three dependent variables from total users, (1) total exact method consistency, (2) simple agreement on use of any contraceptive method, and (3) agreement on limiting method, were considered. Data were analyzed using SPSS version 20.0. Sample weight of women in the couple file was used.

Results:

In India, 64% couples (either husband or wife) reported use of any contraceptive method. Nearly 40% wives and 12% husbands reported using female/male sterilization. Only 21% couples agreed on use of same or different contraceptive methods. Total exact agreement (use and non-use) existed among 53% couples. Eleven percent couples agreed on the use of limiting method, whereas an additional 28% wives reported use of limiting method but husband did not report the same. The ratio of number of husbands to wives who reported use of limiting method was 0.31 (Table 1). Ratio of denial of husband about female sterilization use by wife was 0.69, indicating that either husbands are unaware about the female sterilization use by wives or do not want to report it. The level of denial from husbands about the use of pills was 47%; for condoms 59%; for IUD 61% and in case of male sterilization, it was 31%. Logistic regression with all three independent variables was carried out. Many of the covariates were significantly associated with all the three indicators. Older wives were 30-40% more likely to be in exact agreement on method use than younger wives. Couples from rural India (OR: 1.249 CI:1.178-1.323), Union Territories/North East States (OR: 1.489 CI:1.205-1.840) and other states (OR: 1.486; CI:1.404-1.573) had better exact agreement than women from urban India and Empowered Action Group and southern states. With increase in wealth index from poorest to rich and decision making (from no decision to complete decision by wives), the level of agreement also tended to increase. Increase in wives' education led to increase in disagreement. When husbands believed that contraceptive use is women's business and women who use are promiscuous, the odds ratio was 0.623 (CI: 0.593-0.653) as compared to those who did not agree.

Discussion:

Using latest data available, this study provided differentials and determinants of concordance among couples' report of contraceptive use in India, the second most populous country in the world. A few major findings emerged from our analysis. As opposed to other studies, our study revealed that a higher proportion of wives (59%) reported contraceptive use as compared to

their husbands (25%). The primary contraceptive method reported by both husbands and wives was female sterilization. Despite the fact that men play a significant role in reproductive behavior, the primary focus of India's Family Planning Program has remained on women to space and/or limit excessive childbearing. This has reinforced the belief that family planning (FP) is largely a woman's business, with the man playing a very peripheral role. Agreement on the same method was very limited (16.5%); overall approximately 21% couples agreed on contraception use irrespective of methods. There existed a large denial from husbands regarding the use of female sterilization, and other female-oriented contraceptives.

Even if we consider non-reporting of use of contraceptives by husbands to a stranger (i.e. an investigator) or reporting bias, we cannot deny the fact that husbands are unaware about the use of contraceptive methods by their wives to control their fertility. These findings raise several concerns related to power dynamics among Indian couples, social/husband's acceptance and approval of FP and poor control of women over their bodies and reproductive choices. The wide discordance in couples' reports on contraception raises the questions on whose report is more valid and whether the program's results in terms of meeting family planning goals are accurate. The higher reporting of condom use among wives than husbands raises an alarm that we need to take the indicator of contraceptive prevalence (which is based on women's reports alone) with pinch of salt. Several determinants were also found to be significant in disagreement between husband and wife; the negative attitude of husband towards contraception especially reduced concordance among couples' reports. Given the positive association between concordance and decision making by women, interventions to empower women to participate in decision making and promote gender equality while also including men into FP efforts at the same time, are needed. This highlights the importance of information, education and communication programs to inculcate positive attitudes towards contraception, foster gender equality, encourage decision making by women and involve men into FP efforts. Moreover, in-depth investigation is also required to understand the reasons for such disagreements.

Table 1. Percent distribution of couples reports of current contraceptive use (total, limiting and spacing), measures of agreement (percentage) and ratio of number of husbands and wife who reported contraceptive use, India, 2015-16 (N=62910).

Agreement/No Agreement	India	Place of Residence	
		Urban	Rural
N	62910	22019	40892
Either or both reported use***	63.8	64.5	63.4
Both reported use of method***	20.5	20.0	20.8
Same method***	16.5	15.5	17.1
Different Methods***	4.0	4.6	3.7
Only wife reported use***	38.5	39.3	38.0
Only husband reported use***	4.8	5.1	4.6
Both reported not using***	36.2	35.5	36.6
Summary Measures			
Total exact agreement\$***	52.7	51.0	53.7
Agreement on use!***	56.7	55.5	57.4
Ratio of number of husband to wife who reported contraceptive use	0.43	0.46	0.46
Kappa Analysis	0.26***	0.25***	0.27***
Both reported using modern limiting method	11.0	9.1	12.0
Both reported using modern spacing methods	6.7	7.8	6.2
Either said using for spacing (Traditional or Modern)	16.4	18.7	15.2
Wife said using for Limiting and husband said not using/using for spacing^	28.4	27.6	28.8
Husband said using for Limiting and Wife said not using/using for spacing	1.2	1.3	1.2
Ratio of number of husband and wife who reported use of Limiting method	0.31	0.33	0.35

\$ couples reported using same (contraceptive) method and both reported not using (numerator) out of total couples;
 ! Simply agreement among couples on use without specific method (both reported use of method) and non-use
 (both reported not using) out of total couple; ^ Using for spacing contributes only 1% in total; Significance:
 @p<0.09; *p<0.05; **p<0.01; ***p<0.001

Table 2: Odds ratios of couple's agreement (exact and simple) regarding current contraceptive method used^a as a function of the selected characteristics of the couples^b, India, 2015-16

Background characteristics	Exact Agreement on method use	Background characteristics	Exact Agreement on method use
Age of Wife		Decision making – Wife	
<25®		No decision®	
25-34	1.407***	Partial	1.173***
35 and above	1.315***	Full	1.208***
Age gap b/t Husband & Wife		Caste	
Less than 2 years®		SC/ST®	
3-5 years	1.109**	OBC	0.871***
6 years and above	1.211***	Others	1.011
Wife's Education		Place of Residence	
No Education®		Urban®	
Primary	1.055	Rural	1.249***
Secondary	0.897**	Wealth Index	
Higher	0.835**	Poorest®	
Education gap b/t Husband & Wife		Poorer	1.135**
Equally educated®		Middle	1.149**
Husb. more educated	0.940*	Rich	1.024
Wife more educated	1.076*	Richest	1.187**
Children ever born		Regions	
Less than 2®		EAG States & Assam®	
More than 2	0.972	Southern States	0.812***
Men's opinion: CP is women business & who uses is promiscuous		UT/NE	1.489***
Disagree®		Other states	1.486***
Agree	0.623***	Constant	0.193***
Years since marriage	1.000	N	36418

^a consistency/agreement among contraceptive users only – non users have been removed from the analysis

^b Weighted by women sample weights to obtain nationally representative estimates.

® Reference Category

Significance: @p<0.09; *p<0.05; **p<0.01; ***p<0.001

References:

[1] de Silva, T. & Tenreyro, S. (2017). Population control policies and fertility convergence. *Journal of Economic Perspectives*, 31(4):205-28. doi: 10.1257/jep.31.4.205

[2] Becker, S., Hossain, M., & Thomson, E. (2006). Disagreement in spousal reports of current contraceptive use in sub-saharan Africa. *Journal of Biosocial Science*, 38(6), 779-796. doi:10.1017/S0021932005001069